

2/16/00

In the Claims:

Please amend Claims 1, 11, 38 and 39, all as shown below. Applicant respectfully reserves the right to prosecute any originally presented or canceled claims in a continuing or future application.

1. (Currently Amended) A conversation manager executing on an intermediate collaboration server for managing the flow of messages in a collaboration system, comprising:

a conversation initiation logic that initiates a conversation among a plurality of participants, wherein said conversation is a collective set of messages exchanged by the plurality of participants according to an extensible protocol, ~~wherein said extensible protocol provides the ability to specify both a routing information and a business protocol used by a participant in said conversation, and wherein the routing information is specified by the participant in a header of the extensible protocol;~~

a participation registration logic that registers said participants in said conversation;

a conversation repository that stores conversation management data, ~~wherein said conversation management data is used to manage said conversation among said~~ plurality of participants;

a plurality of business protocol handlers, each of which are configured to ~~use~~ recognize a different business protocol vocabulary, and which may be used by a participant to send and to receive messages according to the particular business protocol vocabulary and process flow used by that participant;

a plurality of decoders that receive incoming messages from senders, identify protocol-specific headers in the incoming messages and assign the incoming messages to an appropriate business protocol handler;

a plurality of encoders that send outgoing messages to recipients, including assigning the outgoing messages to an appropriate business protocol handler that matches the business protocol vocabulary of the recipients; and

a transport configured to accept messages from the participants using any of the different business protocols, identify the business protocol being used, and invoke one or more of said plurality of decoders and encoders to communicate the messages between a first participant using

a first business protocol vocabulary, and ~~a second participant using a second protocol~~ a plurality of other participants using different business protocol vocabularies.

2. (Previously Presented) The conversation manager of claim 1 wherein the conversation manager controls the flow of said conversation between the participants.
3. (Canceled).
4. (Previously Presented) The conversation manager of claim 1 wherein the conversation manager controls a publish/subscribe service for accepting said messages and sending said messages to and from said participants.
5. (Previously Presented) The conversation manager of claim 4 wherein a registered participant sends said messages to the publish/subscribe service for distribution to one or more said participants.
6. (Previously Presented) The conversation manager of claim 1 wherein said conversation is initiated by an initiator participant authorized to initiate conversation.
7. (Previously Presented) The conversation manager of claim 5 wherein the conversation repository includes instructions for the distribution of said messages sent via the publish/subscribe service to the participants.
8. (Previously Presented) The conversation manager of claim 1 wherein said conversation is terminated by a terminator participant authorized to terminate said conversation among all said participants.
9. (Previously Presented) The conversation manager of claim 1 wherein said conversation is aborted by the conversation manager at any time by sending abort messages to said participants.

10. (Previously Presented) The conversation manager of claim 9 wherein a participant in the aborted conversation is compensated for automatically by a substitute participant.

11. (Currently Amended) A method for managing conversations using a conversation manager executing on an intermediate collaboration server of a collaboration system, comprising the steps of:

initiating a conversation among participants, wherein said conversation is a collective set of messages exchanged according to an extensible protocol, wherein said extensible protocol provides the ability to specify both a routing information and a business protocol used by a participant in said conversation, and wherein the routing information is specified by the participant in a header of the extensible protocol;

registering said participants in said conversation;

storing conversation management data in a conversation repository, wherein said conversation management data is used to manage said conversation among said participants;

providing a plurality of business protocol handlers, each of which are configured to use a different business protocol vocabulary, and which may be used by a participant to send and to receive messages according to the particular business protocol vocabulary and process flow used by that participant;

providing a plurality of decoders that receive incoming messages from senders, identify protocol-specific headers [[in]] sent along with the incoming messages and assign the incoming messages to an appropriate business protocol handler~~[[,]]~~;

providing a plurality of encoders that send outgoing messages to recipients, and assign the outgoing messages to an appropriate business protocol handler that matches the business protocol vocabulary of the recipients; and

providing a transport configured to accept messages from the participants using any of the different business protocols, identify the business protocol being used, and invoke one or more of said decoders and encoders to communicate the messages between a first participant using a first business protocol vocabulary , and ~~a second participant using a second protocol~~ a plurality of other participants using different business protocol vocabularies.

12. (Previously Presented) The method of claim 11 including controlling the flow of said conversation between the participants.
13. (Canceled).
14. (Previously Presented) The method of claim 11 including controlling a publish/subscribe service for accepting said messages and sending said messages to and from participants.
15. (Previously Presented) The method of claim 14 including sending said messages from a registered participant to the publish/subscribe service for distribution to one or more participants.
16. (Previously Presented) The method of claim 11 including initiating said conversation by an initiator participant authorized to initiate said conversation.
17. (Previously Presented) The method of claim 15 including storing in the conversation repository instructions for the distribution of said messages sent via the publish/subscribe service to the participants.
18. (Previously Presented) The method of claim 11 including terminating said conversation by a terminator participant authorized to terminate said conversation among all said participants.
19. (Previously Presented) The method of claim 11 including aborting said conversation is aborted by the conversation manager at any time by sending abort messages to said participants.
20. (Previously Presented) The method of claim 19 including compensating automatically for the aborted conversation participant by using a substitute participant.
21. (Canceled).

22. (Previously Presented) The conversation manager of claim 1 wherein said participants define routing and filtering for said messages.

23. (Previously Presented) The conversation manager of claim 1 further comprising a module to apply content transformation for said messages.

24. (Previously Presented) The conversation manager of claim 1 wherein said participants handle the implementation of their own business process with rules defined locally in addition to rules defined by said information and said business protocols.

25-27. (Canceled).

28. (Previously Presented) The conversation manager of claim 1 wherein said conversation repository comprises information related to said business protocols, identifiers for said conversation, identifiers for said participants, identifiers for said messages and said messages.

29. (Canceled).

30. (Previously Presented) The conversation manager of claim 1 wherein said protocol further allows quality of service parameters for each message.

31. (Previously Presented) The conversation manager of claim 1 wherein said conversation initiation mechanism initiates a plurality of concurrent conversations among participants.

32-33. (Canceled).

34. (Previously Presented) The system of claim 1; wherein the business protocol is identified by a uniform resource locator (URL) used by the participants to communicate with said conversation, thereby allowing said conversation to use multiple URL's to support multiple business protocols.

35. (Previously Presented) The system of claim 34, wherein each collaboration space and business protocol combination is subsequently identified by a unique uniform resource locator.

36. (Previously Presented) The method of claim 11, wherein the business protocol is identified by a uniform resource locator (URL) used by the participants to communicate with said conversation, thereby allowing said conversation to use multiple URL's to support multiple business protocols.

37. (Previously Presented) The method of claim 36, wherein each collaboration space and business protocol combination is subsequently identified by a unique uniform resource locator.

38. (Currently Amended) A conversation manager for managing the flow of messages between participants in a collaboration system, comprising:

- a conversation repository stored in the memory space of a computer and including a plurality of collaboration spaces, wherein each collaboration space stores the messages of a particular conversation for delivery to and from the participants as part of that conversation;

- a plurality of business protocol handlers, each of which are configured to use a different business protocol vocabulary, and which may be used by a participant to send and to receive messages according to the particular business protocol vocabulary and process flow used by that participant, ~~and which may be used by a participant to participate in a conversation;~~

- a plurality of decoders that translate messages between the different business protocols, wherein each decoder receives incoming messages from senders, identifies the protocol-specific headers in the incoming messages and then assigns the incoming message to the appropriate business protocol handler;

- a plurality of encoders that send outgoing messages to recipients, including assigning the outgoing messages to an appropriate business protocol handler that matches the business protocol vocabulary of the recipients

- a conversation initiation logic that initiates a conversation as a set of messages within one of the collaboration spaces accessible by any of the business protocols, wherein each collaboration

space and business protocol combination is subsequently identified by a unique uniform resource locator;

a participation registration logic that registers participants in a conversation by allowing a participant using a particular business protocol to access a collaboration space and the conversation therein using the unique uniform resource locator assigned to that collaboration space and protocol combination; and

a transport configured to accept messages from the participants using any of the different business protocols, and according to the uniform resource locator specified, invokes one or more of said decoders and encoders to communicate the messages between a first participant using a first business protocol vocabulary, and ~~a second participant using a second protocol~~ a plurality of other participants using different business protocol vocabularies.

39. (Currently Amended) A method for managing the flow of messages between participants in a collaboration system, comprising the steps of:

providing in the memory space of a computer a plurality of collaboration spaces, wherein each collaboration space stores the messages of a particular conversation for delivery to and from the participants as part of that conversation;

providing a plurality of business protocol handlers, each of which are configured to use a different business protocol vocabulary, and which may be used by a participant to send and to receive messages according to the particular business protocol vocabulary and process flow used by that participant; ~~and which may be used by a participant to participate in a conversation~~;

providing a plurality of decoders that translate messages between the different business protocols, wherein each decoder receives incoming messages from senders, identifies the protocol-specific headers in the incoming messages and then assigns the incoming message to the appropriate business protocol handler;

providing a plurality of encoders that send outgoing messages to recipients, wherein each encoder assigns the outgoing messages to an appropriate business protocol handler that matches the business protocol vocabulary of the recipients

initiating a conversation as a set of messages within one of the collaboration spaces accessible by any of the business protocols, wherein each collaboration space and business protocol combination is subsequently identified by a unique uniform resource locator;

registering participants in a conversation by allowing a participant using a particular business protocol to access a collaboration space and the conversation therein using the unique uniform resource locator assigned to that collaboration space and protocol combination; and

accepting messages from the participants using any of the different business protocols, and according to the uniform resource locator specified, invoking one or more of said decoders and encoders to communicate the messages between a first participant using a first business protocol vocabulary, and ~~a second participant using a second protocol~~ a plurality of other participants using different business protocol vocabularies.